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ABSTRACT

This advisory list describes instructional media appropriate to school science programs for primary through senior high school grade levels. Entries included on the list were selected from those materials submitted by publishers which received favorable reviews by educators. Materials are arranged by type of media, books, films, filmstrips, kits, pictures, slides, slide sets, study prints, and videotape recordings. An unannotated list of books favorably reviewed in the indicated sources is attached. Entries include citation, price if available, grade level, and annotation. For additional materials, see the 1977 Advisory List. (Author/JEG)

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ADVISORY LIST OF INSTRUCTIONAL MEDIA

FOR SCIENCE

State Department of Public Instruction
Division of Educational Media
Raleigh, North Carolina

Fall 1978

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Materials Review and Evaluation Services
Division of Educational Media
State Department of Public Instruction

Raleigh, North Carolina
Fall 1978

ADVISORY LIST OF INSTRUCTIONAL MEDIA

FOR

SCIENCE

This bibliography includes instructional media appropriate to the Science program in the schools. The items are listed by type of media. The order of the listing is as follows:

activity cards	filmstrips (silent)	programmed materials
art prints	filmstrips (sound)	puzzles
books	games	realia
books (for teacher use)	globes	recordings (cassette tapes)
books (reference)	kits	recordings (disc)
books (supplementary texts)	manipulative devices	recordings (reel-to-reel tapes)
books with recordings	maps	reprints
calendars	measuring tapes	shortstrips
charts	microforms	slide sets (2"x2")
dictionaries	mini-units	slide sets (sound)
duplicating masters	models	study prints
film loops (silent)	periodicals	transparencies
film loops (sound)	pictures	videotapes
films (16mm)	posters	workbooks

The absence from this list of a given type of media indicates that no media of that type were reviewed or that none were deemed worthy of being called to the attention of schools. The name of a school administrative unit appearing after an annotation indicates that educators in that school system reviewed the item annotated and submitted the information for inclusion on the ADVISORY LISTS. Occasionally, such items may not appear on display at the Materials Review and Evaluation Center in Raleigh. Educators should bear in mind that materials included on this list were selected from those which publishers chose to submit for evaluation and may assume that materials available for purchase not appearing on the list either were not submitted for evaluation or received unfavorable reviews. Information about negative reviews, which do not appear on this bibliography, can be obtained by writing or calling the Materials Review and Evaluation Center. At the end of this bibliography may be found an unannotated list of books which have had favorable reviews in reliable reviewing sources.

In some cases prices were not available. Prices shown are those quoted by publishers and producers. Prices quoted do not include postage and are subject to change.

All items included on this bibliography except 16mm films and some items suggested for inclusion by local school administrative units are displayed in the Materials Review and Evaluation Center in Raleigh. Information may be obtained by calling (919) 733-3929.

PLEASE DO NOT ORDER ITEMS ON THIS LIST FROM THE MATERIALS REVIEW AND EVALUATION CENTER OR FROM THE DIVISION OF TEXTBOOKS. Sources of the items are listed on the DIRECTORY OF PUBLISHERS AND PRODUCERS FOR THE FALL 1978 ADVISORY LISTS OF INSTRUCTIONAL MEDIA, a separate publication accompanying the complete set of ADVISORY LISTS OF INSTRUCTIONAL MEDIA. An abbreviated or code name for the publisher/producer appearing in the bibliographic entry on this list appears in the DIRECTORY, where the complete address follows the code name.

Schools may use this list to aid in selection of materials but are in no way restricted to purchasing items on this list.

BOOKS

Abruscato, Joes, and Jack Hassard. THE WHOLE COSMOS CATALOG OF SCIENCE ACTIVITIES. Goodyear, 1977. 134 p. $9.95 paper. Grades 5-12

Fascinating collection of science activities to do at home with minimum equipment; three categories: investigations, creative arts, puzzles and games; biographies of scientists stress women, minorities; brief descriptions, clear instructions, emphasis on doing; although excellent, the outsized format (12" x 14"), flimsy newsprint stock, and newspaper style of printing make price fairly stiff; not for limited budgets

Adler, Irving. FOOD. Crowell, 1977. 48 p. $5.95. Grades 5-8

Very general information on the body's food needs and uses, history and symbolic importance of food from unleavened bread of Jews to Thanksgiving turkey; simple, cursory, but adequate introduction for middle graders in science and social studies units; glossary; scanty index; illustrations; from THE REASON WHY Series

Aliki. WILD AND WOOLLY MAMMOTHS. Crowell, 1977. unp. $5.95. Grades 1-3

Mammoths, mammoth hunters, and scientists who study them in much information and straightforward, fast-moving text, humorous drawings; interesting details--30 pounds of flowers, moss, and pine cones in stomach of frozen mammoth found in 1901; rapid-fire presentation of facts and ideas, but background is adequate for a fairly sharp reader; lively, informative

Archer, Jules. EPIDEMIC! THE STORY OF THE DISEASE DETECTIVES. Harcourt, 1977. 149 p. $5.95. Grades 8-12

Interesting, highly readable introduction to epidemics and profession of epidemiology; suspenseful case histories of scourges such as Legionnaires' disease, rabies, cholera, bubonic plague, Lassa fever; heroes are doctors at Center for Disease Control in Atlanta; natural mystery stories, told engrossingly; excellent introduction to problems of epidemics and profession of epidemiology; photos

Asimov, Isaac. THE BEGINNING AND THE END. Doubleday, 1977. 248 p. $8.50. Grades 8-12

Unique science essays, which first appeared in magazines, by prolific science writer on wide variety of topics--fossil fuels, human intelligence, solar energy, planets, space exploration, a drop of water; Asimov's style is typically pithy, tersely poetic; captivating book which banishes notion that science is cut-and-dried; useful to show that science is colorful, imaginative, with the stamp of individual personalities

Asimov, Isaac. HOW DID WE FIND OUT ABOUT OUTER SPACE? Walker & Co., 1977. 62 p. $5.85. Grades 5-8

Well-known science fiction writer relates flight and space accomplishments from Icarus, Montgolfier's balloon, Ferdinand von Zeppelin, Wright Brothers, through historic missions of Yuri Gagarin and Neil Armstrong in highly readable survey of earliest flight efforts, discovery of the vacuum, rockets, launching of satellites, human orbiting in outer space; illustrated; indexed

Asimov, Isaac. QUASAR, QUASAR, BURNING BRIGHT. Doubleday, 1978. $7.95. 240 p. Grades 9-12

Fans of versatile Isaac Asimov will delight in these 17 essays displaying once again the range of his brilliant, inquisitive mind as he ponders Ice Ages past and yet to come, quasars and planets, Antarctic waters, and much more; enthusiastic, witty

Aylesworth, Thomas G. SCIENCE AT THE BALL GAME. Walker & Co., 1977. 77 p. $5.85. Grades 9-12

Scientific principles (laws) such as friction, inertia, acceleration, action and reaction relevant to various acts and movements explained as the laws operate in different sports--e.g., football, baseball, tennis; fully captioned black-and-white action photographs

Berenstain, Stan and Jan. THE BERENSTAIN BEARS' SCIENCE FAIR. Random, 1977. 64 p. $3.95. Grades 2-4

Cartoon story of family of bears that teaches some basics of simple machines, states of matter, and energy; though text is jerky verse that doesn't quite scan, format and humor are engaging, providing good information in candy-coated handfuls

Buckles, Mary Parker. MAMMALS OF THE WORLD. Bantam, 1976. 159 p. $1.95 paper. Grades 7-10

Colorful handbook on mammals; summarizes general characteristics, classification, adaptation, environment; each species described, illustrated with full-color photographs; common and scientific names, habitats, mating, care of young, means of getting food, and defense succinctly covered; indexed

Burstein, John. SLIM GOODBODY: THE INSIDE STORY. McGraw, 1977. unp. $7.94. $4.95 paper. Grades 3-6

Pleasantly different presentation on internal organs and structure of human body, how they interrelate, how we can protect them in good working order; colorful character named Slim Goodbody leads young readers to body awareness through photos, drawings, poetry, cartoons, prose; Slim himself appears in different leotards painted to illustrate different organs, systems; useful anatomical facts, many health tips cleverly and visually defined

Chinery, Michael. LIFE IN THE ZOO. Taplinger, 1976. 96 p. $7.95. Grades 7-12

Photo-essay of animal species in Whipsnade Zoo, describing in minimal text essential work in establishing, maintaining a zoo; many color and black-and-white photos of zoo inhabitants, interesting information about their life in zoo, successful breeding in captivity, research being conducted; excellent volume for building interest in animal studies; little in-depth information on natural history of species; all photos fully captioned; quite a vicarious trip to the zoo

Colby, C. B. UNDERSEAS FRONTIERS: AN INTRODUCTION TO OCEANOGRAPHY. Coward, 1977. 48 p. $4.96. Grades 4-10

Simply explains techniques for undersea research--aquaspace stations, sediment samplers, charting sea bottom--in two-page spreads with brief text, b/w photos, minimal scientific terminology; good information; rather drab photos; some colorful content: floating lab called FLIP that actually upends to send instruments underwater, a perfectly preserved baloney sandwich that had spent a year under 5,000 feet of seawater pressure

Conklin, Gladys. THE OCTOPUS AND OTHER CEPHALOPODS. Holiday, 1977. 63 p. $5.95. Grades 7-8

Entertaining, informative study of octopus, squid, argonaut, other cephalopods, which concludes with a backward look at ancient ammonoids; interesting notes dispel mollusk myths--e.g., the "monster" octopus depicted in undersea adventures is really clever, graceful, timid; excellent, fully captioned black-and-white photos; much information readably, attractively collected

Cosner, Shaaron. AMERICAN WINDMILLS: HARNESSERS OF ENERGY. McKay, 1977. 50 p. $6.95. Grades 7-9

Surveys history and development of American windmills from Plymouth Rock Pilgrims to current proposals of Energy Research and Development Administration (ERDA) and National Aeronautics and Space Administration (NASA); interesting aspect of energy production well presented; black-and-white photos, diagrams

Cowden, Jeanne. CHAMELEONS: THE LITTLE LIONS OF THE REPTILE WORLD. McKay, 1977. 58 p. $7.95. Grades 7-12

Life of flap-neck and dwarf chameleons in South African bush, interspersed with Zulu legend and author's personal observations based on her care of chameleons in private garden; describes mating, feeding habits, gestation period, body characteristics in casual, narrative form; makes point that chameleons are often misunderstood; refers to threats from civilization; lyric style: "The winter drew woods around its days and the chameleons, lovers of the warm sun, knew it was time to move"; shows author's love of the animal; very well done; colorplates

Cowle, Jerry. DISCOVER THE TREES. Sterling, 1977. 96 p. $4.89. Grades 3-5

Potpourri of interesting facts about trees--e.g., tallest, heaviest, deepest roots, largest leaves, most frequently struck by lightning--in bright, appealing, fully illustrated little book; historical trees duly noted--Washington Elm, De Soto Oak, etc.; funny drawings, enthusiastic style, fast reading; author has a mania for capital letters, manages to capitalize just about every noun--this paean to trees is no spelling primer!

Cudmore, L. L. Larison. THE CENTER OF LIFE: A NATURAL HISTORY OF THE CELL. Quadrangle, 1977. 176 p. $8.95. Grades 10-12

Humanistic approach to cellular analysis in eight wittily, philosophically written essays on the building block of all living things; transcends the strictly biological to probe ultimate significance of life and death; for strong science students who read well, think imaginatively

Dixon, Bernard. MAGNIFICENT MICROBES. Atheneum, 1976. 251 p. $8.95. Grades 10-12

Introduces inhabitants of microscopic world as friends rather than foes; considers microbes' positive roles, including scavenging, digestion, fermentation; shows parts these organisms play in familiar processes like making pickles and cheese; interesting, imaginative narrative with some Britishisms; bright, fascinating flow of ideas in first-person, informal essay style that divests science of dry, factual sterility and injects wonder, wit; excellent selection for motivated senior high science students

Emberlin, Diane. CONTRIBUTIONS OF WOMEN: SCIENCE. Described on Biography Advisory List

Epstein, Sam and Beryl. SAVING ELECTRICITY. Garrard, 1977. 64 p. $4.22. Grades 4-6

A blackout in fictional town of Riverton promotes interest in electricity, how it is generated, how individuals and families can conserve it; Jimmy Morris and his classmates learn basics of electric power production and conservation in many useful around-the-house conservation tips for young people; appealing approach; fully illustrated; indexed

Eshleman, Alan. POISON PLANTS. Houghton, 1977. 188 p. $6.95. Grades 5-12

Richly informative, factual presentation of some 30 of world's more common poisonous plants, ranging from herbs, vines, shrubs, trees, to algae and fungi (some fascinating, some dangerous, some useful); includes drawings and descriptions, brief discussions of each poison, toxic effects on animal and human life, medicinal and economic value; popular, readable style; attractive format makes information on each plant accessible; bibliography

Feinman, Max L., M.D., and Josleen Wilson. LIVE LONGER: CONTROL YOUR BLOOD PRESSURE. Coward, 1977. 225 p. $7.95. Grades 10-12

Comprehensive information on problems of high blood pressure, its causes, symptoms, treatment, prevention; extremely readable; well organized with subheadings in bold print; indexed; minimal illustrations

Fisher, Ron. STILL WATERS, WHITE WATERS. Natl. Geog., 1977. 199 p. $4.75. Grades 6-12

Author and photographer of this exceptionally beautiful book canoed over 1,600 miles of America's wilderness waterways, from the still, alligator-infested Okefenokee Swamp to glacier-fed river above Arctic Circle and throughout America's heartland; through descriptive text and superb color photographs, they carry reader with them to enjoy water, land, and inhabitants (human, animal, and fowl), to endure arduous portages, much more; a book to enrich any study of America; a delight to browse; indexed

Foley, Gerald, with Charlotte Nassim. THE ENERGY QUESTION. Penguin, 1976. 344 p. $3.95 paper. Grades 10-12

Comprehensive treatment of energy systems and resources in survey of past and projections into future; examines energy potentials, alternatives, consequences as they affect social, political, economic welfare of civilization; detailed analysis; "must" reading for thoroughly understanding energy crisis; excellent in-depth or summary material on topic

Fox, William W. THE AMAZING BEE. Walck, 1977. 31 p. $5.95. Grades 4-8

Brief study of honeybee, its anatomy, habits, function in ecosystem; also covers beekeeping and hazards to colonies; uninteresting black-and-white drawings are only flaw in otherwise well-presented information for middle grades

Freese, Arthur S. THE MIRACLE OF VISION. Harper, 1977. 181 p. $8.95. Grades 10-12

Interesting, informative literature on human eye; easygoing style explaining the organ's structure, function, diseases; wide variety of eye-related topics: fear of blindness, contact lenses, crying, cosmetics, glaucoma, near-sightedness, infection, visual illusion, recognition; minimal scientific terminology; index; bibliography

George, Frank, ed. SCIENCE FACT: ASTOUNDING AND EXCITING DEVELOPMENTS THAT WILL TRANSFORM YOUR LIFE. Sterling, 1978. 551 p. $8.29. Grades 8-12

The latest, most dramatic and prophetic developments in each major field of science--computers and artificial intelligence, medicine and surgery, astronomy and space science, the sea, energy, psychology and mind control, and more; experts in each field describe latest developments in readable, laymen's terms; forecasts for the future, indicating nothing is impossible--vision for the blind through stomach nerves, self-reproducing computers, cloning of human beings; desirable and undesirable aspects of scientific achievement pointed out; flimsy binding will wear out in a hurry; fascinating content; foreword by Desmond Morris

Glovach, Linda. POTIONS, LOTIONS, TONICS AND TEAS. Prentice, 1977. 117 p. $6.95. Grades 4-12

Terrible Turnip Potion is recommended for crying jags, True Love Tomato Tonic promises what you might expect in collection of recipes for drinks, beauty aids from fruit juices, honey, oils, spices, milk, teas; benefits--often centered on attracting opposite sex--presented in coy but entertaining way; an alternative to sugar and carbonation; a lot of unnecessary white space; index; list of supply sources

Gribbin, John. OUR CHANGING UNIVERSE: THE NEW ASTRONOMY. Dutton, 1976. 160 p. $11.95. Grades 11-12

Examines new astronomy emerging from old observational science of cataloging stars and planetary motions, which was revolutionized by radio telescope, other sophisticated detectors; begins with radio astronomy, explores quasars, pulsars, neutrinos, black and white holes, gravitational radiation; clear, entertaining writing; good color and black-and-white photography; index; bibliography

Hahn, James and Lynn. HAMSTERS, GERBILS, GUINEA PIGS, PET MICE, AND PET RATS. Watts, 1977. 62 p. $4.47. Grades 3-7

Excellent survey of pet rodents, their history, life habits, instructions for their care; their importance in medical research also described; indexed; comprehensive; engaging photos of much maligned family; ideal for classes that have these pets or intend to acquire some

Harris, Lorle. BIOGRAPHY OF A WHOOPING CRANE. Putnam, 1977. 63 p. $4.97. Grades 3-6

Authentic presentation of threatened species through narrative depicting first year of young whooper's life, dangers from predators, hunters, wind currents, as young whooper journeys 1800 miles from California wilderness to winter home in Texas; fictional format sustains attention, suspense, without sentimentalizing or dramatizing facts; outstanding black-and-white watercolors by Kazue Mizumura

Hartman, Jane E. LIVING TOGETHER IN NATURE: HOW SYMBIOSIS WORKS. Holiday, 1977. 39 p. $5.95. Grades 5-9

Excellent introduction to concept of symbiosis through 27 examples from plant and animal world, including ants and aphids, rhinos and tickbirds, ants and caterpillars (Mexico), crocodiles and Egyptian plovers, algae and fungi; carefully distinguishes between symbiosis and parasitism with good examples--e.g., fleas, mistletoe; large, soft, black-and-white drawings on each page; clear, direct text; index

Heady, Eleanor B. TREES ARE FOREVER: HOW THEY GROW FROM SEEDS TO FORESTS. Parents, 1978. 64 p. $5.41. Grades 3-5

The story of trees in general information applicable to nearly all: how a tree develops from seed, takes form, nourishes itself, grows in all its dimensions; strong ecological message in chapters on destructive animals, insects, fires, diseases, human overkill of forests; good drawings depict children of all racial origins engaged in seasonal activities involving trees; diagrams strengthen explanations of growth rings, grafting, etc.; good all-round coverage; indexed

Heintze, Carl. THE BIOSPHERE: EARTH, AIR, FIRE, AND WATER. Nelson, 1977. 128 p. $6.95. Grades 8-11

Penetrating study of biosphere, concentrating on essential elements of life recognized by the ancients--earth, air, fire, water; each element defined, explored as it contributed to origin of life and continues to support life forms; cycles, Ice Age effects, different life zones, other phenomena affecting earth discussed; problems of pollution, energy exhaustion, conservation imperatives conclude text; minimal illustrations; indexed

Hess, Lilo. A DOG BY YOUR SIDE. Scribners, 1977. 89 p. $6.95. Grades 5-9

Dogs, dogs, dogs!--in big black-and-white photos and brief, fast-reading descriptions; especially strong on purebred dogs and training, grooming, readying dogs for shows; covers six groups of dogs recognized by American Kennel Club, picturing and discussing five or six breeds in each group; for dog fanciers, animal lovers in general

Hoke, John. ECOLOGY. Rev. ed. Watts, 1977. 66 p. $4.47. Grades 7-10

Dry but complete coverage of ecology basics, defining all significant terminology, explaining food chains, environmental needs of animals, how they adapt, relationship of plants and animals; emphasizes dangers inherent in our life-style, preparing youth for changes future may require; clear pictorial charts, maps, captioned black-and-white illustrations; key words in bold print; glossary; index

Hunt, Bernice Kohn. DAMS: WATER TAMERS OF THE WORLD. Parents, 1977. 64 p. $4.94. Grades 5-9

Comprehensive treatment of dams, their history, purpose, kinds, designs, failures; one chapter devoted to New York's interesting Croton Dam; good coverage of technical aspects of dams, which is especially strong on history, development; black-and-white illustrations; index

Hurd, Edith Thacher. LOOK FOR A BIRD. Harper, 1977. 31 p. $4.79. Grades K-2

A Science I CAN READ Book identifying 14 common birds--e.g., robin, cardinal, chickadee, mallard duck, screech owl in brief physical descriptions aided by Clement Hurd's soft watercolors of each species; other details on song, habitat, personality--sparrows "are noisy birds" that "fight with other birds, and sometimes steal parts of their nests when the other birds are away"; useful to increase interest, awareness of birds in the young audience

The Impact Team. THE WEATHER CONSPIRACY: THE COMING OF THE NEW ICE AGE. Ballantine, 1977. 234 p. $1.95 paper. Grades 11-12

Cites evidence for "an advance into cooler weather--a Little or a Great Ice Age"; quotes CIA reports that changing weather may be greatest single challenge in coming years; explores currently available information on climatic causes of major glacial advances, retreats; explains ways man has modified atmosphere; clear writing, numerous diagrams, charts, CIA reports on climates, glossary, bibliography

Joseph, Joseph Maron, and Sarah Lee Lippincott. POINT TO THE STARS. Rev. ed. McGraw, 1977. 96 p. $6.84. Grades 7-12

Shows readers how to use "face and point" system employed by astronomers to locate constellations; verbal descriptions, locations, histories, and myths for 24 constellations; also shows how to locate planets and artificial satellites; series of tables give readers current positions of planets against constellations through 1981; charts, diagrams, photos, glossary, index; excellent guide for locating stars and constellations

Klein, Aaron E. YOU AND YOUR BODY: A BOOK OF EXPERIMENTS TO PERFORM ON YOURSELF. Doubleday, 1977. 95 p. $5.95. Grades 7-10

Easy, self-administered experiments to help understand body basics aided by readily available household items or none at all--nothing in the line of sophisticated equipment needed; such questions as how taste buds work, how to hear your heart, how to take your pulse, how to determine your best reading distance, how to test accuracy of your sense of touch, much more, in simple experiments with practical and scientific benefits; index; drawings

Knight, David C. COLONIES IN ORBIT: THE COMING AGE OF HUMAN SETTLEMENTS IN SPACE. Morrow, 1977. 94 p. $5.21. Grades 4-8

Introduces young readers to fascinating concepts discussed, debated by scientists for constructing artificial space satellites as colonies for human beings being crowded off earth's surface; speculates on location, shape, size, design, interior environment, first colonies, and life in such a colony; highly conjectural content relies heavily on work of Dr. Gerard K. O'Neill, Princeton physics professor and chief author of NASA projects for orbiting communities in space; science and science fiction legitimately linked in provocative reading; photos, drawings, diagrams; glossary and index

Lavine, Sigmund A. A BEGINNER'S BOOK OF VEGETABLE GARDENING. Dodd, 1977. 128 p. $5.95. Grades 7-12

Practical how-to guide offering comprehensive advice to both novice and advanced gardener; clear photos and diagrams aid tool selection, hotbed construction, insect identification, transplanting; charts show frost-free dates, planting data; sections on how to grow each major vegetable crop and garden maintenance chores; index; excellent reference

Lowery, Barbara. OIL. Watts, 1977. 48 p. $3.90. Grades 3-4

Explains this multi-use energy source in satisfying, simple terms; covers forming, finding, getting, distributing, using oil; maps locate oil-bearing regions; important vocabulary in heavy type phonetically spelled in context; line drawings, highlighted in blue, are clear and expository, but unexceptional graphically; good for teaching young children about energy

McDearmon, Kay. COUGAR. Dodd, 1977. 48 p. $4.95. Grades 4-7

An exoneration of the much maligned cougar in text and photos capturing the animal's fierce beauty and exploding myths about this essential predator; narrative style heightens appeal; fine addition to wildlife books; no index

Menzel, Donald H., and Ernest H. Taves. THE UFO ENGIMA: THE DEFINITIVE EXPLANATION OF THE UFO PHENOMENON. Doubleday, 1977. 297 p. $8.95. Grades 10-12

Attempts to ground the idea of green men in flying saucers! Couples astrophysics and chemical analysis in systematic, scientific debunking of UFO's--"the vagaries of physiological optics"; lucid, unemotional; examines dancing moons, floating lights, whistling noises, ghost ships, rainbows, haloes, cylinders with antennas; photos show both visual illusions and hoaxes; concludes that global problems tempt people to believe in rescue by superior civilization; valuable for serious study of these phenomena

Michell, John. SECRETS OF THE STONES: THE STORY OF ASTRO-ARCHAEOLOGY. Penguin, 1977. 96 p. $2.95 paper. Grades 9-12

Interesting treatment of a newly developing theory, astro-archaeology, which credits ancient peoples with knowledge of astronomical science far in advance of later civilizations; new look at Stone Age, the Druids, Stonehenge, implications for us today; fully illustrated in well-captioned black-and-white photos, diagrams; appealing format; challenging vocabulary and concepts--definitely not idle browsing for your routine, horoscope-reading Taurian, Leo, et al.

Miklowitz, Gloria D. EARTHQUAKE! Messner, 1977. 96 p. $7.29. Grades 5-12

Interesting history of earthquakes, their causes, prevention, how to withstand them; cites famous quakes in history, describing earth shifts which caused them, damage inflicted by them; vivid black-and-white photos extend content, clarifying scientific principles and terms--e.g., "plate tectonics," "epicenter"; glossary, index

Miller, Jane. BIRTH OF A FOAL. Lippincott, 1977. unp. $6.95. Grades 2-3

Highly appealing photo record of birth of Fizz, a Welsh pony, which shows Fizz's mother giving birth, Fizz getting her legs, gradually gaining strength as she drinks her mother's milk, explores Hampshire, England, farm; warm parent-offspring relationship conveyed in full-page, black-and-white photos; spare text; factual, unsentimental, lovely; superior publication

Moyes, Patricia. HOW TO TALK TO YOUR CAT. Holt, 1978. 118 p. $6.95. Grades 7-12

Readable book for cat owners by cat-loving author who believes cats have deep need for human friendship and communication; explains in detail cat's verbal and nonverbal language; offers some hints on cat care but is not a cat care reference; primary focus is on cat language and behavior

Murdin, Paul and Lesley. THE NEW ASTRONOMY. Crowell, 1978. 215 p. $12.95. Grades 9-12

Up-to-date presentation of more familiar concepts of celestial bodies, with references to earlier beliefs about structure and formation of visible bodies in our sky; text launches with 1054 A.D. and the supernova that created the Crab Nebula, tracing 20th-century investigations of the Crab and other pulsars in text, drawings; black-and-white photographs; interesting, challenging content for science students generally and those interested in astrophysics, astronomy, and space science specifically

Neal, Harry Edward. THE STORY OF OFFSHORE OIL. Messner, 1977. 64 p. $6.64. Grades 5-8

Excellent simplified introduction to drilling of offshore oil wells, technical aspects of finding oil, drilling on platform rigs; describes life on a rig--fishing, food, constant hum of motors--keeping interest high; nice black-and-white photos of each major idea; women depicted on job; good use of narrative style--opening scene of oilman shutting off midnight alarm clock, heading out to work; index; glossary

Page, Thornton, and Lou Williams Page, eds. SPACE SCIENCE AND ASTRONOMY: ESCAPE FROM EARTH. (The Macmillan Sky and Telescope Library of Astronomy, V.9.) Macmillan, 1976. 467 p. $13.95. Grade 12

Essays first published in SKY AND TELESCOPE Magazine by two experts on problems surrounding space travel; 10 sections on major topics--e.g., history of space flight, moon and planets, landing problems, spacecraft design, deep space orbital astronomy; well done, but technical nature limits application to advanced students; index; glossary; space age chronology

Parker, Alice. TERRARIUMS. Watts, 1977. 47 p. $3.90. Grades 2-4

Clear, easy, well-illustrated instructions for building a terrarium; delightful little pen-and-ink drawings highlighted in green; appealing instructions (find "small stones--about the size of your teeth"); how-to's for building woodland, tropical, or desert terrariums; covers equipment, plants, planting, maintenance

Parks, James. A DAY AT THE BOTTOM OF THE SEA. Crane Russack, 1977. (Available from Scribners). 104 p. $7.95. Grades 8-12

Special-interest title recounting a day spent at the bottom of the sea by the DEEP QUEST, a submersible which reaches depths beyond 4,000 feet; fact-filled, narrative style, reporting in minute-by-minute account the careful preparations for descent, the launch, probe, and ascent; fascinating for those with strong interest in marine biology, oceanography; a reasoned plea for environmental protection interwoven with discussion of ocean floor finds, refuse, plant and animal life; black-and-white photos

Patent, Dorothy Hinshaw. REPTILES AND HOW THEY REPRODUCE. Holiday, 1977. 127 p. $6.95. Grades 7-10

Comprehensive treatment of reptiles, their origins, special adaptations, communication, establishing territories, courtship, mating; life cycle and information on reproductive cycle; also brief summary of development of egg; charcoal illustrations; wide margins, good print; glossary, index

Paul, Aileen. KIDS OUTDOOR GARDENING. Doubleday, 1978. 80 p. $5.95. Grades 3-6

Beginner's guide to outdoor and indoor vegetable gardening; discusses garden layout, soil preparation, insect control, harvest; often refers to Agricultural Extension Service agent for advanced information; attractive, accessible format; good, simple illustrations; sepia-toned print and drawings; index; list of additional references

Pringle, Laurence. THE CONTROVERSIAL COYOTE: PREDATION, POLITICS, AND ECOLOGY. Harcourt, 1977. 76 p. $5.95. Grades 6-10

Readable, insightful treatment of a complex, controversial wildlife problem, the coyote, written by wildlife biologist; sheds light on coyote-sheep controversy gained from studies conducted in Western U. S.; a reasoned appeal for balance in nature assured by predators' role; photos, bibliography, index

Rau, Margaret. THE GIANT PANDA AT HOME. Knopf, 1977. 80 p. $5.99. Grades 4-8

Captures the life of this popular, newsworthy animal in its natural habitat, the bamboo of west China; much detail on mating, feeding, migrating, life cycle of giant panda; black-and-white illustrations add greatly; index; bibliography

Renner, Al G. HOW TO BUILD A BETTER MOUSETRAP CAR -- AND OTHER EXPERIMENTAL SCIENCE FUN. Dodd, 1977. 128 p. $5.25. Grades 4-9

Many creative suggestions with instructions for fun and challenging scientific experiments; diagrams, drawings, succinct directions, tips for extending and broadening projects based on scientific data tested in building process; attractive format; use with adult supervision--some experiments dangerous

Ricciuti, Edward R. SOUNDS OF ANIMALS AT NIGHT. Harper, 1977. 56 p. $5.79. Grades 4-7

Nighttime sounds of varied animals and what their language means, from frogs, toads, owls, grasshoppers to jackrabbits, coyotes, wolves, others, in chapters on birds, insects, mammals, amphibians; author does good job of phonetically imitating creature sounds, explaining their purposes--mating, danger signals, territory claims; illustrated; indexed

Ritter, Rhoda. ROCKS AND FOSSILS. Watts, 1977. 48 p. $3.90. Grades 3-4

Introduction to geology and paleontology which covers formation and characteristics of fossils and igneous, metamorphic, and sedimentary rocks, erosion, meteors, and moon rocks; simple language; scientific terms defined in text and accompanied by pronunciation guides; many black-and-white drawings accented in blue; well-placed photographs in black and white

Roach, Marilynne K. DUNE FOX. Little, 1977. 32 p. $6.95. Grades 4-6

Explores sand dunes in Cape Cod area by accompanying a fox who hunts there; exquisite watercolors in shades of blue, brown, and sand illustrate plant and animal life, each carefully drawn and labeled for easy identification; circle panels focus on important lessons such as evolution of dunes, specific insects; fairly simple text with some difficult words--"gorged," "ravenous" ; will appeal

DUNE FOX (Cont'd)

to young students curious about nature or who care about coastal areas, ecology; useful resource for art students or for studying contrasts in coastal zones such as New England and Southeast; glossary of plants and animals provides common names and scientific Latin titles for more enterprising readers

Sagan, Carl. THE DRAGONS OF EDEN: SPECULATIONS ON THE EVOLUTION OF HUMAN INTELLIGENCE. Ballantine, 1977. 271 p. $2.25 paper. Grades 10-12

Few scientific books can compete with this nationwide bestseller for clarity of thought, excitement of idea; beginning with a cosmic calendar, Sagan discusses origins of man as a species and as an intelligent, thinking being; exciting, stimulating adventure, especially when discussion turns to the future and possibilities of human intelligence; challenges us to think--"knowledge is our destiny"

Schwartz, Julius. EARTHWATCH: SPACE-TIME INVESTIGATIONS WITH A GLOBE. McGraw, 1977. 63 p. $6.84. Grades 7-10

How to mount and use a globe to relay sundry information about earth and space; explains how this simple instrument can show travel of sunrise, location of sun's most direct rays, earth's speed, sun's position in orbit; experiments and demonstrations; staging an eclipse, "taking the globe's temperature"; a one-idea book; many diagrams, drawings; index; bibliography; tables of distances, velocities

Selsam, Millicent E., and Jerome Wexler. THE AMAZING DANDELION. Morrow, 1977. 48 p. $5.49. Grades K-4

A lot about a plant both familiar and delightful to children; clear, thorough treatment of parts of dandelion plant, derivation of name, pollination, how a "blowball" forms, why dandelions can quickly cover a lawn; good black-and-white photos, six in color; excellent purchase; read-aloud and picture book experience for youngest children

Shedenhelm, W. R. C. THE YOUNG ROCKHOUND'S HANDBOOK. Putnam, 1978. 127 p. $6.95. Grades 6-12

Basic information for young rock collectors in tips on how to form mineral collections, process collections, secure needed materials and equipment; also, history of rock and mineral formations, their characteristics, location, and identification; format is not overly inviting--lots of unbroken text, a few black-and-white photos (how color would help)-- but content is solid, writing is vigorous, and appendices offer excellent follow-up; advice on panning and prospecting for gold will lure a lot of little capitalists!

Shuttlesworth, Dorothy E., and Lee Ann Williams. THE MOON: STEPPINGSTONE TO OUTER SPACE. Doubleday, 1977. 117 p. $5.95. Grades 5-8

Complete, up-to-date work combining best of Branley's MOON: EARTH'S NATURAL SATELLITE and his STORY OF THE MOON ROCKS; examines concept of moon as permanent, natural space station in exploration of outer space; recounts moon mythology and early theories; describes each of 17 Apollo missions, their astronauts, information revealed by moon rocks, lunar topography, phases and eclipses, tides, man-made satellites, other planets' moons, our own moon's potential; technical terms explained; extensive black-and-white photos, many from Apollo missions; appendix ("Moon Facts in Brief"), glossary, index

Shuttlesworth, Dorothy E. ZOOS IN THE MAKING. Dutton, 1977. 117 p. $8.50. Grades 4-10

About the kind of zoo North Carolina is developing in Randolph County, this book explores new approach of placing animals in natural habitats, behind natural barriers rather than bars; packed with information on zoo operation--best age for capturing elephants, how to keep animals from getting bored; North Carolina Zoo mentioned with numerous others; well written; nice print, wide margins; black-and-white photos; index; bibliography

Simon, Seymour. BENEATH YOUR FEET. Walker & Co., 1977. unp. $5.85. Grades 3-6

Information on different types of soil, rain's effects on soil types, animals in the soil, and strong ecology message in not only readable but also "do-able" text, easy experiments; detailed black/orange/gray illustrations; contents compatible with science units on nature trails, conservation, erosion, sedimentation, germination, soil animals, layers and types of soil (Charlotte-Mecklenburg)

Simon, Seymour. WHAT DO YOU WANT TO KNOW ABOUT GUPPIES? Four Winds, 1977. 66 p. $6.95. Grades 4-6

Everything you need to know to raise guppies--history, physiology, instructions on setting up guppy aquarium, care and feeding, breeding, nursing sick guppies; lists different kinds of guppies, other animals that can live with guppies; well organized; easy-to-read print; good black-and-white drawings

Taylor, David. ZOO VET: ADVENTURES OF A WILD ANIMAL DOCTOR. Described on Biography Advisory List

Taylor, L. B., Jr. GIFTS FROM SPACE: HOW SPACE TECHNOLOGY IS IMPROVING LIFE ON EARTH. John Day, 1977. 130 p. $7.95. Grades 5-12

Global television, safer tires, improved cookware, frost prevention in orchards, better golf clubs and fishing rods, dozens of medical advances--these are a few spin-offs of space research; hundreds of new products and techniques discussed; everyday examples in readable text; black-and-white photos; structured for student reader; index; bibliography

Teleki, Geza, and Karen Steffy. GOBLIN, A WILD CHIMPANZEE. Dutton, 1977. 56 p. $7.95. Grades 3-5

Cameras follow Goblin, six-year-old chimp in troop watched by Jane Goodall in Tanzania, through a day from first yawn to berry picking, temper tantrum, tree swinging, sitting still for his mother to clean his hair, a snack of figs before bedtime; a lot for a child to identify with; very good black-and-white photos, though their quality varies; close-ups of expressive eyes, scenes of human-like interaction, and easy-going text

Warner, William W. BEAUTIFUL SWIMMERS: WATERMEN, CRABS, AND THE CHESAPEAKE BAY. Little, 1976. 304 p. $10. Also available from Penguin for $2.95 paper. Grades 10-12

Described on January 1977 Science Advisory List

Wheatly, Margaret Tipton. GARDENING ROUND THE YEAR. Woodbridge, 1977. 244 p. $4.95 paper. Grades 9-12

Follows seasons from spring to winter, discussing plants, gardening activities, for each month; closing chapters devoted to tools, planting, garden maintenance, plant nutrition; flowing style that is occasionally trite--"the first breath of autumn"; adequate, appropriate illustrations; useful appendices

White, William, Jr. THE CYCLE OF THE SEASONS. Sterling, 1977. 80 p. $4.89. Grades 7-9

Quick overview of major weather influences and the six ecological seasons--prevernal, vernal, aestival, serotinal, autumn, winter; well-labeled black-and-white photos, diagrams; six color photos; index; satisfactory supplement to earth science studies

Books in a Series

EASY-READ WILDLIFE BOOKS. Watts, 1976, 1977. each 32 p. each $4.33. Grades 2-4
Harris, Susan. ODD ANIMALS
Harris, Susan. SWIMMING MAMMALS
Prescott, Ernest. CREATURES THAT HELP EACH OTHER
Prescott, Ernest. FLYING CREATURES
Prescott, Ernest. SLOW CREATURES
Prescott, Ernest. WHAT COMES OUT OF AN EGG?

Exotic, little-known creatures briefly described, their uniqueness highlighted in text and large, colored drawings; centers on strange animals, unusual symbiotic relationships, animals that fly but are not birds, other natural phenomena of animal kingdom; phonetic spellings given; conventional and metric measurements used; indexed; fully illustrated; interesting enrichment series for motivated young readers

FIRST FACT BOOKS. Lerner, 1977. each unp. each $3.95. Grades 2-4
Caveney, Sylvia, and Rosemary Giesen. WHERE AM I?
Thompson, Brenda, and Rosemary Giesen. BONES AND SKELETONS
Thompson, Brenda, and Rosemary Giesen. FAMOUS PLANES
Thompson, Brenda, and Rosemary Giesen. ROCKETS AND ASTRONAUTS
Thompson, Brenda, and Rosemary Giesen. THE STORY OF STEEL
Thompson, Brenda, and Cynthia Overbeck. ANIMAL ATTACKERS
Thompson, Brenda, and Cynthia Overbeck. MONKEYS AND APES
Thompson, Brenda, and Cynthia Overbeck. SPACESHIP EARTH
Thompson, Brenda, and Cynthia Overbeck. UNDER THE SEA
Thompson, Brenda, and Cynthia Overbeck. VOLCANOES
Thompson, Brenda, and Cynthia Overbeck. THE WINDS THAT BLOW

Series designed for beginning independent readers curious about natural science, history, themselves; high-interest topics in appealing text, full-colored drawings; additional information and word list conclude each book; if not photographically accurate, drawings are colorful, convey concepts vividly; useful for extending knowledge, spurring interest of children who have just learned to read

Sheehan, Angela. A FIRST LOOK AT NATURE BOOKS. Warwick Press, 1977. (Available from Watts). each unp. each $3.50. Grades 2-4
TITLES: THE BUMBLEBEE; THE BUTTERFLY; THE FROG; THE HEDGEHOG

Beautifully illustrated books from England introducing early grades to scientific principles through detailed presentations of life cycles of bumblebee, butterfly, frog, hedgehog; narrated in story form without sentimentalizing, anthropomorphizing; each book describes birth, daily life, questing for food, fending off enemies, mating, hibernating, contributions to ecosystem, and death in natural, factual telling that puts each creature's life in perspective in biological community; lavishly, accurately illustrated; no counterpart of hedgehog exists in America, and white admiral butterfly may be less familiar to American children; also, phonetic spellings of terms (e.g., "chrysalides") would strengthen text; still, these books succeed laudably in capturing for young audiences the concept of cycles and stages, interrelationships and interdependence characterizing all life forms

BOOKS (REFERENCE)

HOW IT WORKS: THE ILLUSTRATED ENCYCLOPEDIA OF SCIENCE AND TECHNOLOGY (20 volumes). Described on Reference Books Advisory List

NEW JUNIOR ENCYCLOPEDIA OF SCIENCE (16 volumes). Described on Reference Books Advisory List

Sheehan, Angela, ed. THE PREHISTORIC WORLD. Described on Reference Books Advisory List

TIME-LIFE ENCYCLOPEDIA OF GARDENING (17 titles). Described on Reference Books Advisory List

WILD, WILD WORLD OF ANIMALS (14 titles). Described on Reference Books Advisory List

BOOKS (SUPPLEMENTARY TEXTS)

Avery, Thomas Eugene. INTERPRETATION OF AERIAL PHOTOGRAPHS. 3rd ed. Burgess, 1977. 392 p. $15.95. Grade 12

Excellent text for advanced earth science students or teacher who needs basic understanding of aerial photography and its application; designed as college text for beginners; moves sequentially through entire process of planning, photographing, interpreting aerial photographs for various purposes; clear, pertinent illustrations; photographs demonstrate aerial technique's varied uses: Stonehenge, a copper-mining region, intersecting bays of Cumberland County in North Carolina, central California by satellite, missile sites in North Vietnam, parking lots in Youngstown, Ohio; index, exercises, glossary, short-course outline

Lesser, Milton, et al. CONTEMPORARY SCIENCE. BOOKS 1 AND 2. Amsco, 1977. each 428 p. each $3.80 paper. Grades 7-9

Two-volume general science survey; Volume One covers basic ecology, life science, geology; Volume Two treats meteorology, the solar system, and physical science, using energy-based approach; brief, often oversimplified explanations of basic science principles; line drawings and diagrams; each chapter contains suggested laboratory experiments, review questions, open-ended discussion topics; simplified format makes these books useful for underachievers to reinforce learning in Grades 7-9

FILMS (16MM)

AMPHIBIANS: WHAT, WHEN, AND WHERE. 16mm. 15 min. sd. guide color $195. Intl. Film Bur., 1976. Grades 3-7

In-depth, interesting introduction to mating habits, life cycle, habitats of frogs, toads, salamanders; discusses methods of breathing in water and air; classroom observations shown and discussed, with emphasis on returning animals to natural habitats

ANIMAL CAMOUFLAGE. 16mm. 9 min. sd. guide color $135. BFA, 1977. Grades 4-8

Illustrates three elements of animal camouflage: protective coloration, protective resemblance, and mimicry; examples include trout, ptarmigan bird, praying mantis, other insects and fish; clear presentation of information; major points repeated to ensure learning; good color photography often freezes on screen to show how animals blend into environment

ANIMAL MIGRATION. 16mm. 12 min. sd. guide color $170. BFA, 1977. Grades 7-10

Reviews our attempts to understand animal migration--ancient beliefs and modern tracking systems (radar, radio), laboratory experiments to determine

ANIMAL MIGRATION (Cont'd)

if animals use stars as guides, reasons for migration-- for food, raising young; birds, fish, insects, mammals shown; useful introduction to or summary of topic

ANTS: HUNTERS AND GARDENERS. 16mm. 11 min. sd. guide color $150. Natl. Geog., 1977. Grades 7-12

Surveys army ants and leaf cutter ants on island of Trinidad, showing characteristics, life-styles, habits; excellent photography; restricted coverage of subject; content not directly related to science curriculum in North Carolina but useful enrichment for some areas; for already complete science collections seeking an "extra"; preview before purchase

COLOR FROM LIGHT. 16mm. 11 min. sd. guide color $155. Churchill, 1976. Grades 9-12

Chiefly an animated study of composition of white light and uses made of additive and subtractive principles to produce light effects; shows how a prism separates white light into its component colors, why objects appear colored, how colored light may combine to form white light or different colors of spectrum, and explains complimentary colors; uses animation to illustrate principles of light separation and combination

ELEMENTARY NATURAL SCIENCE: EASTERN COTTONTAIL. 16mm. 11 min. sd. guide color $175. Centron, 1976. Grades 6-10

Shows Eastern cottontail rabbit's wide distribution, life cycle, habitually high rate of reproduction, methods of caring for young; cottontail's specific role in ecosystem described, special adaptations of color, teeth; shows how man has destroyed much of rabbit's habitat; thought-provoking questions interspersed in narration; interesting way of teaching ecological principles and concepts

ELEMENTARY NATURAL SCIENCE: OWLS. 16mm. 16 min. sd. guide color $240. Centron, 1976. Grades 4-10

In-depth coverage of the owl--variety, special adaptations, unique role in ecosystem, man's effects; also reviews range, food habits, nesting, caring for young; teacher's manual with vocabulary, concepts, follow-up activities

ENERGY: WHAT ABOUT TOMORROW? 16mm. 21 min. sd. guide color $295. Barr, 1978. Grades 9-12

Reviews the history of increasing demands for energy, surveying potential sources; gives possibilities, advantages, and detrimental impact on environment of energy sources such as solar energy, geothermal energy, atomic fission, and atomic fusion; general information about new sources of energy in useful introduction

ENERGY MONSTERS: HOW TO STARVE THEM. 16mm. 12 min. sd. guide color $185. BFA, 1978. Grades 3-6

Jan and Alex check their house for ways to reduce energy waste, focusing on using kitchen and large appliances more efficiently, cutting down on heat loss through windows and walls, minimizing hot water use; no dialogue; narrator explains action; somewhat sexist (sister Jan "really shines in the kitchen"); adequate treatment; important topic which should be presented to students; appropriate if collection lacks other materials on subject

FALL BRINGS CHANGES. 2nd ed. 16mm. 12 min. sd. guide color $170. Churchill, 1976. Grades K-3

Pleasant visual experience for K-3 children, noting changes in nature as fall transforms plants, animals; includes special holidays and activities associated with autumn; children fill pleasant scenes of apple harvests, pumpkin fields, leafy lawns; close-ups of animals storing food, finding warm winter homes; enrichment purchase for large collections

GULP AND GEE! SCIENCE AND ROLLER COASTERS. 16mm. 20 min. sd. guide color $315. Centron, 1977. Grades 7-11

Unique, fun-filled lesson on physics of energy, gravity, friction, centrifugal and centripetal forces, scientific methods of problem solving; succeeds in interpreting abstruse principles through lively examples illustrating concepts--e.g., why loop-the-loop roller coasters don't fly off track, how rotating amusement park ride works in which floor drops out and riders remain fast against surrounding walls; ideal for group developmental lesson

HOW TO MAKE A SOLAR HEATER. 16mm. 20 min. sd. guide color $290. Handel, 1976. Grades 10-12

Information on construction of solar heater, using inexpensive materials and materials salvaged from demolition sites; useful to generate concern and to emphasize value of conserving natural sources of energy

HOW WE KNOW THE EARTH MOVES. Rev. ed. 16 mm. 10 min. sd. guide color $150. BFA, 1977. Grades 4-9

Shows several methods early astronomers used to determine that earth moves; demonstrates Foucault Pendulum and earth's rotation in relation to constellation positions; while watching film, viewers actually participate in experiment illustrating star shift; graphically uneven, some footage is very modern and appealing, older footage from original 1960 version rather ponderous; preview this and other materials treating same subject before purchasing

LEARNING ABOUT AIR. 16mm. 11 min. sd. color $190. Paramount, 1976. Grades 3-5

Along the lines of the TV series, ZOOM, this film depicts children as they play/conduct experiments with air to demonstrate air pressure, weight of air, musical wind instruments, wind power producing energy to light a bicycle lamp; no children's voices; narrator explains action; clown-like Mr. Air appears and disappears, attempting to visualize invisible air; beautiful landscape scenes, enticing pictures of children and their antics; unfortunately, no teacher's guide lists post-viewing activities; however, a teacher preview will suggest many

LEARNING ABOUT SOLIDS, LIQUIDS AND GASES. 16mm. 11 min. sd. color $190. Paramount, 1976. Grades 4-8

Study of physical states of matter, illustrating solid, liquid, gaseous; indicates that some forms of matter are found in different states because of temperature differences; identifies solids, liquids, and gases according to size, shape, volume; children provide action to illustrate narrative, an effective device for capturing interest

LIFE IN A TROPICAL RAINFOREST. 16mm. 14 min. sd. guide color $200. BFA, 1977. Grades 7-12

Excellent introduction to tropical rain forest environment for life science and biology classes; low-keyed production with superb photography; narrator explains each concept in logical sequence, illustrated with unusually good visual examples; shows overall structure of rain forest, structure of plant community, and relationship of community to various animal species; discussion

LIFE IN A TROPICAL RAINFOREST (Cont'd)

of animals populating rain forest contains superb collection of predator-prey encounters to sustain interest in film's closing minutes

LIGHT IS MANY THINGS. 16mm. 12 min. sd. guide color $180. Barr, 1977. Grades 4-9

Interesting, easy presentation on light, using children to discuss facts gained through reading, observation, discussion with adults; information ranges from primitive man's knowledge to modern science's findings, including sources of light, artificial light, components of white light, Aristotle's comments, Newton's explanations, Einstein's theory; graphic demonstrations include observations from sun dial, use of magnifying glasses, and use of light by plants in manufacturing food

POISON ANIMALS OF THE UNITED STATES. 16mm. 15 min. sd. guide color $225. BFA, 1978. Grades 4-12

Depicts lethal animals in their natural habitats, describes their behavior, offers identification hints; particularly good section on the bee and its stinger, poisonous snakes and their venom; shows ants, spiders, scorpions, rattlesnakes, pit vipers, others; engrossing

ROCKS AND MINERALS. Rev. ed. 16mm. 17 min. sd. guide color $245. BFA, 1978. Grades 4-8

Simple, useful introduction to world of rocks and minerals--basic properties of minerals, character of rocks, three major classes of rocks and their origin; no in-depth study; teachers will find film helpful for introducing subject with fourth-eighth-grade students

THE SILENT FOREST. 16mm. 23 min. sd. guide color $345. Barr, 1978. Grades 10-12

Rare shots of kelpbeds anchored to ocean floor, reaching to the surface on the Pacific coastline of North America; beautiful color photography of sea animals who live in those beds--seals, otters, lobsters, jellyfish, an octopus; portrays destructive power of pollution over vulnerable kelp and marine life; for ecology-minded students, students in biology or oceanography

SPRING BRINGS CHANGES. 2nd ed. 16mm. 11 min. sd. guide color $155. Churchill, 1975. Grades 2-4

Colorful stimulus for science study or creative writing assignments through pleasant review of signs of springtime--longer, warmer days, spring showers, budding fields and trees, animal births, farmers plowing and planting; excellent close-up photography of bees, humming birds, caterpillars; time-lapse photography of Monarch butterfly emerging from skin; lots of children, vivid color; inspiration for planting gardens like children's in film; useful introduction to skills of observation

UNIVERSE. 16mm. 28 min. sd. guide color $295. Benchmark, 1978. Grades 5-12

NASA-produced film focuses on sun, how it and other stars were formed from explosion billions of years ago, its change over time, composition of inner core and outer shell; also describes solar wind, sun spots; presents a "you are there" view of sun from each planet (e.g., from Pluto's frozen, forbidding landscape, sun appears a small but rather bright star); projects future destruction of sun; touches on quasars, pulsars, black holes; shows magnitude of galaxy and beyond; gives students a feel for size of universe and tremendous energy present

WONDERS IN YOUR OWN BACKYARD. 2nd ed. 16mm. 11 min. sd. guide color $155. Churchill, 1977. Grades K-3

Several appealing children find science alive in their own backyards as they examine a spider entrapping a fly, a snail huddling in its "house," a grasshopper springing from leaves, an earthworm tunneling through soil, other garden-variety life forms; exceptionally good close-up photography; vivid color; nicely narrated

WONDERS OF GROWING PLANTS. 2nd ed. 16mm. 11 min. sd. guide color $155. Churchill, 1976. Grades 1-4

Creative presentation of plant growth demonstrating that plants grow not only from seeds but also from stems, roots, leaves; young Richard and Stacy grow plants from lima bean seeds, sprig of creeping charlie, sweet potato root, leaf from piggy back plant; time-lapse photography visualizes each plant's growth process; ideal for large-group introduction to unit

ZOO FAMILIES. Rev. ed. 16mm. 9 min. sd. guide color $130. BFA, 1977. Grades K-1

Joey and his three friends visit zoo, see monkeys, kangaroos, hippopotamuses, alligators, and their young; glimpses of animals' behavior and mothering; not inspired, but adequate treatment and photography for young students beginning to recognize animals

Films (16mm) in a Series

JANE GOODALL: STUDIES OF THE CHIMPANZEE. 2 reels 16mm. sd. guide color $620. each $310. Natl. Geog., 1977

INTRODUCTION TO CHIMPANZEE BEHAVIOR. Grades 10-12

Excellent introduction to science of animal behavior and problems involved in studying any advanced animal species; briefly describes history of Dr. Goodall's studies, with primary focus on behavior of adults and children in chimpanzee society; although narration explains behavior in relation to overall structure of society, the majority of information about chimpanzee comes from superb camera's-eye view of animal's behavior; excellent film for behaviorally oriented portions of biology courses or upper-level high school anthropology courses

HIERARCHY AND THE ALPHA MALE. Grades 11-12

Describes the social behavior of males in chimpanzee society; sparse narration; film depends heavily on exceptional photography to demonstrate behavioral phenomena within male hierarchy; film should be used in conjunction with INTRODUCTION TO CHIMPANZEE BEHAVIOR or after considerable preparation since it does not contain sufficient introductory material to be presented unaided; excellent for advanced biology classes or upper-level high school introductory anthropology courses

FILMSTRIPS (SOUND)

DINOSAURS. 1 color filmstrip, 1 cassette tape, guide $18. Natl. Geog., 1978. Grades 2-6

Brief history and facts about dinosaurs, centering on paleontologists' detective work identifying dinosaur fossils and reconstructing their behavior, habitat; shows today's descendents--lizards, crocodiles, sea turtles; excellent, full-color illustrations interpret primeval setting and dinosaurs themselves; photographs show fossils and scientists at work reassembling massive bone structure; careful, methodical narrative; high-interest topic well presented

HARNESSING THE SUN. 1 color filmstrip, 1 cassette tape, guide $18. Natl. Geog., 1977. Grades 5-8

Survey of methods used to capture solar energy; reviews ways sun's energy is already producing energy on earth, touching on potential solar energy available; illustrates several forms of solar collectors--mirrors, water-filled drums, panels; points out that trees, other plants (e.g., seaweed) store solar energy; good variety of color photos; clear, well-organized narration; preview before purchase to insure relevance to curriculum

SHARKS. 1 color filmstrip, 1 cassette tape, guide $18. Natl. Geog., 1977. Grades 5-8

Brief examination of the shark, pointing out differences and similarities in various species, such as color, size, habitat; indicates some methods used to study sharks in their natural habitat; provides little specific information of a scientific nature but could be used in middle grades to introduce subject, build interest; should be previewed prior to purchase to be sure it fits curriculum; clear, easy-to-understand narration; dramatic, yet unobtrusive sound effects; good color photos--excellent one of shark's teeth

Filmstrips (Sound) in a Series

ADVENTURES IN SCIENCE. 3 units each containing 4 color filmstrips, 4 cassette tapes, guide $208.50. each $69.50. Scholastic, 1977. Grades 9-12

THE BODY
- CIRCULATION AND RESPIRATION
- GENETICS AND BLOOD
- DIGESTION AND HUNGER
- MUSCLES AND NERVES

THE EARTH
- CONTINENTAL DRIFT
- MOUNTAIN BUILDING
- EARTHQUAKES AND TSUNAMIS
- VOLCANOES

MATTER
- ATOMS: THEIR ORIGIN
- ATOMS: THEIR ORDER
- ATOMS: REACTING
- ATOMS: THE NUCLEUS

Series investigates origin, order, reaction, and nucleus of atoms, forces which shape earth's surface, and anatomical structure and physiological functions of the body; titles of each unit and filmstrip self-explanatory; appealing, modern, exceptionally well done; full-color drawings and photographs; light, yet engrossing and fact-filled narrative; scientific principles often explained in terms of everyday occurrences--e.g., boiling water, exploding teakettle; complete teacher's guidebooks include filmstrip objectives, discussion topics, quiz questions, bibliography of related reading materials, script

BEGINNING CONCEPTS: SCIENCE. 2 units each containing 5 color filmstrips, 5 cassette tapes, guide $139. each $69.50. with disc recordings $139. each $69.50. Scholastic, 1977. Grades K-3

UNIT 1
- Titles: SNAILS WHALES ANTS AND PLANTS; BONES AND WINGS AND TEETH AND THINGS; SOMETHING OLD SOMETHING NEW; HIDE AND SEEK; SHARING AND CARING

UNIT 2
- Titles: PLOP BUBBLE AND FIZZ; WHAT'S GOING ON?; DOING WHAT YOU'RE DOING; PRESTO CHANGO!; DOWN TO EARTH

Lively exploration of basic science concepts presented largely through easygoing, fast-paced conversations between children and their parents; UNIT I on life sciences examines concepts of living and non-living things, differences between plants and animals, plant and animal structure and adaptation, birth, life, death, and interdependence of all living things; UNIT II on physical sciences

BEGINNING CONCEPTS: SCIENCE (Cont'd)

studies solids, liquids, gases, energy, work, machines, weathering, and conservation; attractive color photos of children and activities; excellent, well-thought-out teacher's guide with extensive background information, discussion, follow-up activities; in SOMETHING OLD, SOMETHING NEW, parents and children discuss, in natural and open manner, birth and death as part of continuous life cycle of all plants and animals; exceptional, motivating primary science material

BIRDS OF PREY. 4 color filmstrips, 4 cassette tapes, guide $65. with 2 disc recordings $65. Coronet, 1976. Grades 5-12

Titles: THEIR CHARACTERISTICS; HAWKS, EAGLES, AND VULTURES; OWLS; THEIR SURVIVAL

Much information on mysterious predatory birds, presented as endangered wildlife; hypnotic close-ups of owl eyes, bird-in-flight shots; covers roles of national symbols and Indian gods, nesting, migration, physical characteristics; cites hunters, pesticides, loss of habitats, as threats to species; shows hawk-watchers and clinics that treat injured birds of prey; takes a little longer than necessary to make basic points; good but sometimes repetitious photos

DISCOVERING FOSSILS. 4 color filmstrips, 4 cassette tapes, guide $65. with 2 disc recordings $65. Coronet, 1977. Grades 4-8

Titles: COLLECTING SMALL FOSSILS; DIGGING FOR DINOSAURS; RECONSTRUCTING PREHISTORIC ERAS; CLUES TO DATING FOSSILS

An adventure in geologic history which describes fossils, how they form, what they tell us about earth's history; individual titles self-explanatory; light, appealing overview useful to motivate students and begin in-depth study; excellent fossil close-ups; good on-location photos of Arizona, Colorado, Utah, Dinosaur National Monument; primitive illustrations of dinosaurs

DO YOUR PROJECT RIGHT! 4 color filmstrips, 4 cassette tapes, guide $90. Barr, 1977. Grades 3-6

Titles: IDEAS COME FROM DREAMS; RESEARCH MAKES IDEAS COME TRUE; DETERMINATION GETS THE JOB DONE; FEEL GOOD ABOUT WHAT YOU DO

Paired to work on Science Fair project, artistic Lisa and electronic wizard Alan have trouble agreeing on idea, eventually decide to make a robot which answers questions on nutrition; designs are researched and, despite difficulties, they finish robot in time for fair; original story which captures students' attention, teaches much about compromise, hard work, self-worth; excellent resource for interdisciplinary unit, integrating science, language arts, media, art skills; good female storyteller narrates; well photographed

EBE BIOLOGY PROGRAM, SERIES 1: THE PROTISTS. 4 color filmstrips, 4 cassette tapes, guide $57.95. EBE, 1976. Grades 10-12

HOW LIVING THINGS ARE CLASSIFIED
BACTERIA, BLUE-GREEN ALGAE, AND VIRUSES
ALGAE
THE DECOMPOSERS: FUNGI, SLIME MOLDS, AND PROTOZOA

Introduces and reviews biological classification scheme established by Carl von Linné, or Carolus Linnaeus; examines lowest forms of plant and animal life, plus living things which fall somewhere in between; organisms of protista are divided into those which produce their own food, those that cause decay or decomposition; includes survey of algae, fungi, slime molds, diatoms, euglena, dinoflagellates, other primitive organisms; a few sound effects; clear, sharp, color photographs; important vocabulary appears on frames; helpful charts, drawings, further illustrate; useful introduction to ecology or study of life sciences

EBE BIOLOGY PROGRAM, SERIES 2: THE PLANTS. 5 color filmstrips, 5 cassette tapes, guide $72.50. EBE, 1976. Grades 10-12

MOSSES AND LIVERWORTS
FERNS AND THEIR ALLIES
GYMNOSPERMS
ANGIOSPERMS: DIVERSITY AND REPRODUCTION
ANGIOSPERMS: ROOTS, STEMS, AND LEAVES

Filmstrip series comprising a vertical study of plants from simpler mosses, liverworts, to ferns and club mosses, to gymnosperms, concluding with angiosperms; describes each group of plants, habitat, ecological niche, reproduction, economic importance; examines diversity and functions of systems of flowering plants; clear, full-color photos; many close-ups; labeled diagrams, charts; all important vocabulary spelled out on frames; suitable for botany, biology, life science courses

EBE BIOLOGY PROGRAM, SERIES 3: THE LOWER INVERTEBRATES. 5 color filmstrips, 5 cassette tapes, guide $72.50. EBE, 1976. Grades 10-12

PLATYHELMINTHES: THE FLATWORMS
ASCHELMINTHES: NEMATODES AND ROTIFERS
SPONGES
COELENTERATES AND CTENOPHORES
MOLLUSKS

Filmstrips treating more primitive invertebrates, including flatworms, round worms, rotifers, sponges, jellyfish, related animals, and mollusks; animal structure, life habits, reproductive cycles, methods of locomotion, economic importance explained; bilateral and radical symmetry compared; animals with three layers of cells introduced; teacher's guide contains complete scripts, discussion questions; clear, close-up photography; well-defined, labeled drawings; good pacing; for high school biology classes

EBE BIOLOGY PROGRAM, SERIES 5: THE LOWER VERTEBRATES. 5 color filmstrips, 5 cassette tapes, guide $72.50. EBE, 1976. Grades 10-12

LOWER CHORDATES AND PRIMITIVE FISHES
BONY FISHES
AMPHIBIANS
REPTILES
BIRDS

Surveys the principal forms of lower vertebrates, including sea squirts, amphioxus, hagfish, lampreys, sharks, rays, skates, fishes, amphibians, reptiles, birds; credits development of notochord and internal skeleton as evolutionary achievement permitting growth of complex land and sea animal forms present today; includes identifying characteristics of each animal group; good color and detail; close-ups, drawings, diagrams; sound effects; numbered frames for quick reference; full scripts in teacher's guide; suitable for biological sciences in senior high school

EBE BIOLOGY PROGRAM, SERIES 6: THE MAMMALS. 5 color filmstrips, 5 cassette tapes, guide $72.50. EBE, 1976. Grades 10-12

INTRODUCTION TO PRIMITIVE ORDERS
INTRODUCTION TO PLACENTALS
CARNIVORES, CETACEANS, AND PINNIPEDS
UNGULATES AND SUBUNGULATES
PRIMATES

Study of evolution of mammals in descriptions of functions, form, mammalian body, distinguishing characteristics of principal classes and orders; notes the similarities between reptiles and primitive egg-laying mammals, and high degree of specialization of placental mammals; compares primate orders, including lemurs, monkeys, apes, man; sound effects; nice pace; good detail; full-color, numbered frames; complete scripts in teacher's manual; for senior high school biological science classes

ECOLOGY AND THE ROLE OF MAN. 6 color filmstrips, 6 cassette tapes, guide $86.95. EBE, 1975. Grades 5-12

THE PASSENGER PIGEON: CARING TOO LATE
THE BUFFALO: CARING IN TIME
THE BALD EAGLE: AN ENDANGERED SYMBOL
THE KAIBAB DEER: A LESSON IN MANAGEMENT
THE AMERICAN ELM: A FATAL JOURNEY
THE REDWOOD: WHY SAVE A TREE?

Explores relationship of humankind to other living things and effects of human activities on ecological balance in selected situations; reviews practices which led to extinction of passenger pigeon and near extinction of American bison, kaibab deer, American elm, California redwoods; provides information on steps taken to restore nature's balance and preserve endangered species; makes viewer feel the loss: "the passenger pigeon was a beautiful bird with red breast, blue-gray back, and bright orange eyes"; graphics of surprising color, sophisticated simplicity; there is a narrative element in the fates of these species--interesting story lines; suggestions for further study of topic; suitable for science, conservation, ecology classes

ENERGY FOR MAN. 4 color filmstrips, 4 cassette tapes, guide $68. with disc recordings $56. BFA, 1975. Grades 8-12

A HISTORY OF MAN'S USE OF ENERGY
FOOD AND ENERGY
ENERGY AT HOME AND AT WORK
ENERGY AND OUR FUTURE

Rather advanced treatment of issue of energy production and use; introductory and most elementary filmstrip presents history, with surprisingly interesting graphics of subjects like coal miners, textile mills; FOOD AND ENERGY counts calories for energy-hungry U.S.A.--in 1970 we spent eight calories to produce one; ENERGY AT HOME AND AT WORK explains, with percentages and equations, conversion efficiency, raises questions about how to improve efficiency; ENERGY AND OUR FUTURE examines dangers and potentials of nuclear power, alternatives such as solar or windpower; concludes with how to deal with "an energy-scarce" future

ENERGY FOR TOMORROW. 3 color filmstrips, 3 cassette tapes, guides $59.95. Ed. Materials, 1976. Grades 8-12

Titles: SOLAR ENERGY; NUCLEAR ENERGY; ENERGY ALTERNATIVES

Relatively unexploited forms of energy presented, emphasizing solar and nuclear with solar described as inevitable source of majority of world's power; raises hope that finally "the only plume of smoke will come from the camper's fire"; nuclear energy hailed as best replacement of fossil fuels; covers potential of wave power, ocean currents, wind, bioconversion, others; clear explanations; good photography; ENERGY ALTERNATIVES, with waterfalls and volcanoes, is particularly appealing visually; guides with scripts, summaries, vocabulary, bibliographies

ENERGY: THE BIG E. 4 color filmstrips, 4 cassette tapes, guide $80. AIMS, 1976. Grades 5-9

THE BIG 3 FROM THE BIG E
WHERE IT CAME FROM AND WHERE IT'S GOING
USES AND ABUSES
ENERGY, THE SHORTAGE AND YOU

A summary look at history of civilization's dependence on energy from wood fires to air conditioning, emphasizing depletion of energy resources and alternatives for future; cartoons, illustrations, photographs; useful introductory tool; not in-depth presentation, rather an adjunct to well-developed unit of study

GEOLOGY: OUR DYNAMIC EARTH. 4 color filmstrips, 4 cassette tapes, 1 map, guides $62.50. with disc recordings $62.50. Natl. Geog., 1977. Grades 8-12
Titles: THE FACE OF THE EARTH; THE CHANGING LAND; THE RESTLESS EARTH; GEOLOGY AND YOU

Vivid color photographs and graphs illustrate earth's features; THE FACE OF THE EARTH explores earth's probable origin, pictures various land forms and rock types; THE CHANGING LAND shows work of glaciers, weathering, and erosion over the earth's millions of years; THE RESTLESS EARTH looks at effects of plate movement, earthquakes, and volcanoes on the face of the land; GEOLOGY AND YOU relates earth's resources to everyday life, their influence on building materials, fuel, others; technically accurate with simplified but descriptive vocabulary; excellent series for earth science courses and enrichment for ecology, environmental science classes; LANDSAT map shows photomosaic of U.S.; guides provide suggested teaching techniques, assistance with technical language

INVESTIGATING WEATHER. 6 color filmstrips, 6 cassette tapes, guide $95. with 3 disc recordings $95. Coronet, 1977. Grades 4-8
Titles: CAUSES; WINDS; CLOUDS AND PRECIPITATION; CHANGING PATTERNS; FRONTS AND STORMS; FORECASTING

Thorough study of weather phenomena, with each filmstrip describing one element of weather, its signs, causes, effects; suggests classroom experiments--e.g., determining which heats and cools faster, a tray of water, sand, or soil; many photographic examples of weather throughout U.S.; clear diagrams explain fronts, circulation patterns, air masses, others; well-organized, complete, easy to follow narration; excellent for earth science, other science courses

LET'S ASK MR. WONDER. 4 color filmstrips, two 12" disc recordings 33-1/3 rpm, guide $55. with 4 cassette tapes $60. Coronet, 1976. Grades K-3

ABOUT SHADOWS	ABOUT WIND
ABOUT RAIN	ABOUT SHELLS

Keenly alert children with inquisitive minds turn to Mr. Wonder and his magic window for light on some of nature's mysteries; cartoon characters and photographs illustrate each lesson, though some drawings are static and dull; explanations clearly presented in question-and-answer format for reinforcement; teacher's guide includes objectives, summary, additional science activities for each filmstrip; guide also suggests ways to integrate language arts skills such as speaking, reading enrichment, creative writing, research

LIFE IN THE SEA. 4 color filmstrips, 4 cassette tapes, guide $68. with disc recordings $56. BFA, 1977. Grades 6-9
Titles: PLANTS AND SIMPLE SEA ANIMALS; SEA ANIMALS WITHOUT BACKBONES; ARMORED AND SPINY-SKINNED SEA ANIMALS; SEA ANIMALS WITH BACKBONES

Surveys groups of plants and animals living in the sea in minimum information about major distinguishing characteristics and features of each individual species; mentions place of organism in ecosystem; major asset of series is full-color photography of actual specimens; useful for enrichment in junior high science classes; not appropriate for in-depth study

THE OCEANS: A KEY TO OUR FUTURE. 5 color filmstrips, 5 cassette tapes, guide $75. United Learning, 1977. Grades 7-12

THE OCEANS: PAST, PRESENT AND FUTURE
THE OCEANS: A STOREHOUSE OF FOOD
THE OCEANS: A STOREHOUSE OF RAW MATERIALS
THE OCEANS: A STOREHOUSE OF POWER
CHANGING THE OCEANS

Explores oceans in terms of geologic history, general concepts, use, and importance as sources of food, minerals, power; stresses importance of international cooperation in their regulation and conservation; full-color drawings and photographs illustrate theories and concepts; teacher's guide provides evaluation activities, suggested projects; useful resource for group or individual study of general science, oceanography, social studies, ecology

PLANTS: SOURCE OF LIFE SERIES. 6 color filmstrips, 6 cassette tapes, guide $125. Barr, 1977. Grades 4-8

Titles: PLANTS AND PLANT CELLS; PLANTS: LEAVES; PLANTS: FLOWERS AND FRUITS; PLANTS: ROOTS AND STEMS; PLANTS: SEEDS AND SEEDLINGS; SPORE-PRODUCING PLANTS

In-depth examination of important parts of plant; each filmstrip describes a plant part; detailed, labeled diagrams show structure, introduce scientific terms such as "cotyledon," "auxins," "chloroplasts"; photos of various species illustrate actual structure as it occurs in nature; each point developed by friendly, conversational narration; unique introductory filmstrip frames give summary and learning objectives; highly instructional programs

POLLUTION: PROBLEMS AND PROSPECTS. 2 color filmstrips, 2 cassette tapes, guides $35. Natl. Geog., 1977. Grades 7-12

Titles: THE LAND; AIR AND WATER

Examines types and causes of pollution of land, water, air in information on how pollution can be reduced or prevented and results of continuing pollution; full-color photographs and realistic background sounds on sound track add to quality and force of series

PRIMARY SCIENCE. NON-LIVING MATTER. 3 sets each containing 6 color filmstrips, 6 cassette tapes, guide $205.50. each $72.50. with 3 disc recordings $205.50. each $72.50. Clearvue, 1976. (Available from Stone's.) Grades 3-6

THE EARTH
ROCKS AND MINERALS
OCEANS
MOUNTAINS
DESERTS
AIR AND THE ATMOSPHERE
RAIN AND CLOUDS

THE SOLAR SYSTEM
STARS
PLANETS, PART I
PLANETS, PART II
THE EARTH
THE MOON
SPACE FLIGHT

MATTER AND ENERGY
MATTER AND ENERGY
HEAT, FIRE AND FUELS
LIGHT
MACHINES AND FRICTION
MAGNETISM AND ELECTRICITY
SOUND

Survey of the more important areas of science through cartoon characters and full-color drawings illustrating principles and processes observed in nature; each program restricted to thorough, in-depth study of one topic for elementary schoolchildren; much scientific information packed into dialogue between young people and "Dr. Whizbang"; ordinary, observable illustrations clarify concepts such as light refraction, sound waves, heat conduction, etc.; lively narration easy to follow, with minimum of technical words and terms

SAVING OUR PLANET (two color filmstrips). Described on Social Studies Advisory List

SAVING OUR WILD ANIMALS. 2 color filmstrips, 2 cassette tapes, guides $35. Natl. Geog., 1978. Grades 4-8

Titles: LAND ANIMALS; AIR AND WATER ANIMALS

Looks at extinct and endangered species and efforts made to preserve them; attributes animals' extinction to killing and loss of habitat; explains methods--e.g., radio collars, capture and tagging activities--used to research animal behavior and determine best means of protecting species; some mention of protectionists' citizen groups; LAND ANIMALS shows bison, prairie dog, caribou, bighorn sheep, others; AIR AND WATER ANIMALS depicts Carolina parakeet, whales, bald eagle, sea otter, others; complete script in teacher's guide; excellent nature photographs in full color

SCIENCE AND YOU. 6 color filmstrips, 6 cassette tapes, guide $125. Barr, 1977. Grades 6-8

Titles: YOU AND ENERGY; YOU AND COMMUNICATION; YOU AND TRANSPORTATION; YOU AND HEALTH; YOU AND SHELTER; YOU AND FOOD

Summarizes history and current trends in six critical fields; presents economic concerns (scarcity of resources), social concerns (more population, longer life), and possible future alternatives (e.g., teacher will be programmed computer) to spur discussion or focus independent study projects; useful in interdisciplinary units; bright, contemporary-styled photographs engulf viewer; good colored illustrations often included to tell historic facts; open-ended

WARD'S SOLO-LEARN SYSTEM. 5 boxes each containing 1 color filmstrip, 1 cassette tape, package of 25 student review sheets, guide each $29. Wards, 1976. Grades 9-12

CONTINENTAL DRIFT I: A THEORY IS BORN
CONTINENTAL DRIFT II: SEA FLOOR SPREADING
INTRODUCTION TO ACID-BASE THEORY
INTRODUCTION TO OXIDATION-REDUCTION CHEMISTRY
RESPIRATORY SYSTEM: STRUCTURE AND FUNCTION

Designed for independent study of continental drift theory, respiratory system, oxidation-reduction reactions, acid-base theory; drawings, photos, and blackboard-style math assist in clarifying concepts, illustrating similarities and differences in processes; student review sheets allow review of sections of each topic as study continues; very methodical workbook format; appropriate for individual study in high school science classes

WHAT IS SCIENCE? (four boxes each containing four color filmstrips). Described on Vocational Education Advisory List

WORLD OF THE SEA. 2 sets each containing 3 color filmstrips, 3 cassette tapes, guide $129.95. each $68.50. with disc recordings $129.95. each $68.50. Guidance Assocs., 1977. Grades 7-12

GROUP ONE

Titles: BALANCE OF NATURE; PLANTS OF THE SEA AND SHORE; REALM OF THE SEA

GROUP TWO

Titles: MARINE VERTEBRATES: MAMMALS; MARINE VERTEBRATES: FISHES; MARINE INVERTEBRATES

Comprehensive, thorough overview of marine life and sea environment, sequentially presenting the place of marine life in the food chain and adaptation of organisms to their habitats; recent scientific studies of sharks have led scientists to believe sharks are not basically so vicious as indicated in this presentation; clear, concise tape presentation and good color photography; boxed in two manageable containers, durable enough for average use; possibilities for extensive use in many fields of science; teacher's guides provide background information, instructional diagrams, references, vocabulary lists, discussion questions, review, and suggested activities; script included (Wilkes County)

KITS

EARTHQUAKES. 1 color filmstrip, 1 cassette tape, 3 color pictures, 30 copies of text, 2 duplicating masters, 2 printed copies of duplicating masters for photocopying, guide $14.95. Natl. Geog., 1977. Grades 1-5

Introduces three aspects of earthquakes--what they are, what causes them, how scientists predict them; three colorful photographs illustrate lesson, which is clearly explained on tape accompanied by following read-along text; solid content for earth science classes while providing reading reinforcement, practice in sharpening listening/comprehension skills, vocabulary building, alphabetizing and spelling exercises; suitable for group work or independent study; filmstrip not essential to program--just duplicates the three photos; teacher's guide, question/answer ditto carbons

SEASONS: AUTUMN. 1 color filmstrip, 1 cassette tape, 3 color pictures, 30 copies of text, 2 duplicating masters, 2 printed copies of duplicating masters for photocopying, guide $14.95. Natl. Geog., 1977. Grades 1-3

Shows autumn in three vivid photographs, discussing why leaves change color and fall, migration of birds, habits of squirrels; tape is easily understood just by listening or by following in read-along text; provides science content, reading reinforcement, practice in sharpening listening/comprehension skills, vocabulary building, alphabetizing and spelling practice; suitable for group work or independent study; filmstrip unessential to program, as it consists of four frames duplicating the three photos; teacher's guide, question/answer ditto carbons

WHAT IS AN INSECT? 1 color filmstrip, 1 cassette tape, 3 color pictures, 30 copies of text, 2 duplicating masters, 2 printed copies of duplicating masters for photocopying, guide $14.95. Natl. Geog., 1977. Grades 1-3

Introduces children to anatomy of insects and their life cycles; exquisite photos--fly, caterpillar, ladybug--show three of four life-cycle stages--eggs, larva, adult (pupa stage discussed but not shown); self-directed tape easily understood by just listening or following in read-along text; provides solid content for science classes, reading reinforcement, practice in sharpening listening/comprehension skills, exercises in vocabulary building, alphabetizing, spelling; suitable for group work or independent study; filmstrip unessential to program, as it consists of four frames duplicating the three photos; includes teacher's guide, question/answer ditto carbons

WHAT IS A REPTILE? 1 color filmstrip, 1 cassette tape, 3 color pictures, 30 copies of text, 2 duplicating masters, 2 printed copies of duplicating masters for photocopying, guide $14.95. Natl. Geog., 1977. Grades 1-3

Explains snakes, alligators, and turtles through three superb photographs and a tape easily understood by just listening or following in read-along text; provides science content, reading reinforcement, practice in sharpening listening/comprehension skills, vocabulary building, alphabetizing and spelling practice; suitable for group work or independent study; filmstrip unessential to program (just a duplicate of the three photos); teacher's guide, question/answer ditto carbons

Kits in a Series

BALANCING EQUATIONS. 4 sets each containing 1 color filmstrip, 1 cassette tape, 1 set of slides, 1 workbook each $50. Prentice-Hall Media, 1977. Grades 11-12

Titles: BALANCING CHEMICAL EQUATIONS BY INSPECTION; OXIDATION AND REDUCTION REACTIONS; BALANCING REDOX EQUATIONS: ION-ELECTRON METHOD; BALANCING REDOX EQUATIONS: CHANGE IN OXIDATION NUMBER METHOD

Each segment of program on balancing chemical equations has instructional material and accompanying workbook for practice and reinforcement of knowledge; tapes occasionally direct students to problems in workbooks; useful for self-instruction or for individual in-depth study of topics; requires considerable knowledge of chemistry prior to individual study; graphic format is equations and diagrams highlighted with color

STOICHIOMETRIC CALCULATIONS. 4 sets each containing 1 color filmstrip, 1 cassette tape, 1 set of slides, 1 workbook each $50. Prentice-Hall Media, 1977. Grades 11-12

Titles: STOICHIOMETRIC CONCEPTS; THE FACTOR UNIT METHOD; LIMITING REAGENT CONCEPT; SOLVING EQUIVALENT WEIGHT PROBLEMS

Programmed learning materials with accompanying student workbook teaching calculation of atomic weight, mass and volume, balancing equations, converting measurements, and solving equivalent weight problems of acids, bases, oxidizing and reducing agents; sequential programs arranged so that students may stop and review; student workbook offers many problems and solutions; clear, colorful charts and tables explain concepts and procedures to follow; useful in chemistry classes for independent study or review; no guide or written text of narration

PICTURES

Müller, Jörg. THE CHANGING CITY. 8 color, fold-out pictures 12" x 34" $9.95. Atheneum, 1977. Grades K-12

Müller, Jörg. THE CHANGING COUNTRYSIDE. 7 color, fold-out pictures 12" x 34" $9.95. Atheneum, 1977. Grades K-12

Posters by Swiss artist, filled with drama and emotional impact; THE CHANGING COUNTRYSIDE shows transition of one piece of land; THE CHANGING CITY views same streets over period of 23 years; posters depict transformation of small, open, stone arcade to airport grill--one small detail in a wide cityscape; sequenced over a period of time to help children see how world changes around them and to start weighing merits of change; intriguing, somewhat stylized paintings filled with details most children love; as these details are destroyed, one after another, thoughts and feelings mix; unusual versatile teaching package; young children could collect pictures showing changes in their own streets, countryside; valuable and enlightening for any age; excellent environmental awareness materials for young children

SLIDE SETS (SOUND)

THE MIRACLE OF ALL LIFE: VALUES IN BIOLOGY. 80 color slides, 1 cassette tape, one 12" disc recording 33 1/3 rpm, 1 carousel cartridge, guide $74.44. Ctr. Humanities, 1975. Grades 9-12

Overlooked beauties of nature, diverse, unexpected, lovely patterns of life in glimpses of minute sea organisms, insects, elephants on savannah, Eskimos in far North; examples both exotic and commonplace; beautiful photography; script encourages interest, further study; appropriate for life science studies; comprehensive teacher's guide

THE SCIENCE AND ETHICS OF POPULATION CONTROL: AN OVERBURDENED EARTH? 2 units each containing 80 color slides, 1 cassette tape, one 12" disc recording 33 1/3 rpm, 1 carousel cartridge; guide $124.50. Ctr. Humanities, 1975. . Grades 10-12

Discusses ethics, methods, consequences of human birth control, comparing population growth patterns of "have" and "have not" nations and using examples from nature to project possibilities of human existence in future; compares urban and suburban life-styles, emphasizing need to conserve earth space for agriculture, recreation; charts and graphs illustrate major points on birth rates, population patterns, death rates; excellent color photos of superior visual quality; time provided periodically throughout program for discussion of questions raised; all questions presented in open-ended manner with emphasis on personal, private nature of decisions regarding family size; excellent, thought-provoking material for senior high school science or social studies classes

SOLAR ENERGY: PUTTING SUNSHINE IN YOUR LIFE. 2 units each containing 60 color slides, 1 cassette tape, 1 12" disc recording 33 1/3 rpm, 1 carousel cartridge; guide $139.50. Ctr. Humanities, 1978. Grades 10-12

Two examples of buildings heated by sun; PART I records steps taken by Colorado high school students who constructed greenhouse for growing food in ideal environment; PART II shows several "passive" and "active" solar heating units for homes; homeowners explain house designs, how solar systems work; program includes diagrams of each system, showing air and water flow; fast-moving narration requires more than one viewing; beautiful photographs

STUDY PRINTS

LEARNING ABOUT WEATHER. Cook, 1978. 16 color prints 12" x 17", guide $5.50. Grades K-3

Introduces more obvious aspects of weather and atmospheric conditions--clouds, rain, hurricanes, tornados, drought, fog; attractive, poster-size prints are colorful photos which frequently feature children in content; basic information printed on reverse side of picture; teacher's guide expands on topic with suggested activities, short stories, bibliography of related reading materials; most information is accurate but may be quite advanced for intended audience; examine before purchase; book format may be more suitable for intended instruction

VIDEOTAPES

LANDSAT: SATELLITE FOR ALL SEASONS. 6 color videocassette tapes, guide $660. each $110. AIT, 1977. Grades 8-12

Titles: REMOTE POSSIBILITIES; THE WET LOOK; THE FRACTURED LOOK; POLLUTION SOLUTION?; LAND FOR PEOPLE, LAND FOR BEARS; GROWING CONCERNS

Interesting, informative programs which take students to the cutting edge of satellite technology; introductory program explains how LANDSAT satellite system gathers information about earth's surface from space; succeeding programs deal with particular problems: THE WET LOOK with water resources, THE FRACTURED LOOK with geologic mapping and mineral resources, POLLUTION SOLUTION? with mapping of water pollution problems, LAND FOR PEOPLE, LAND FOR BEARS with land-use problems, and GROWING CONCERNS with mapping of agricultural production and plant diseases; well produced, moving smoothly and stimulating interest; each idea explained simply, logically; titles can be used independently of each other

BOOKS REVIEWED IN OTHER SOURCES

The books listed below have received favorable reviews in one or more of the following reviewing sources. Code letters for the reviewing sources are cited after the bibliographic entry for each title. The reviewing sources and their code letters are as follows:

AMERICAN LIBRARIES	AL
APPRAISAL	A
BOOK REVIEW DIGEST	BRD
BOOKLIST	BKL
BULLETIN OF THE CENTER FOR CHILDREN'S BOOKS	BCCB
CHILDREN'S BOOK REVIEW SERVICE	CBRS
CHOICE	C
HORN BOOK	HB
KIRKUS REVIEWS	KR
LIBRARY JOURNAL	LJ
PUBLISHERS WEEKLY	PW
SCHOOL LIBRARY JOURNAL	SLJ
SCIENCE AND CHILDREN	SC
SCIENCE BOOKS AND FILMS	SBF
TOP OF THE NEWS	TN
WILSON LIBRARY BULLETIN	WLB

An asterisk after the code letters for the reviewing source indicates that the title was highly recommended in that particular reviewing source.

Carrick, Carol. SAND TIGER SHARK. Seabury, 1977. unp. $6.95. Grades 4-6 BCCB BKL KR PW SLJ

Goldin, Augusta. GRASS: THE EVERYTHING, EVERYWHERE PLANT. Nelson, 1977. 176 p. $7.95. Grades 5-9 BKL KR SLJ

Gunn, D. L., and J. G. R. Stevens, eds. PESTICIDES AND HUMAN WELFARE. Oxford U. Pr., 1976. 218 p. $11. $4 paper. Teacher use LJ

Lucas, Angela and Derek. FOCUS ON WATER. Scribners, 1976. 47 p. $3.95 Grades 5-8 SLJ

Measures, David G. BRIGHT WINGS OF SUMMER: WATCHING BUTTERFLIES. Prentice, 1976. 160 p. $12.95. Grades 7-12 SBF

Pinkwater, Jill, and D. Manus. SUPERPUPPY: HOW TO CHOOSE, RAISE, AND TRAIN THE BEST POSSIBLE DOG FOR YOU. Seabury, 1977. 206 p. $9.95. Grades 5-9 KR PW SLJ*

Pringle, Laurence. ANIMALS AND THEIR NICHES: HOW SPECIES SHARE RESOURCES. Morrow, 1977. 64 p. $4.59. Grades 4-6 BKL KR SLJ

Sarnoff, Jane, and Reynold Ruffins. A GREAT AQUARIUM BOOK: THE PUTTING-IT-TOGETHER GUIDE FOR BEGINNERS. Scribners, 1977. 47 p. $7.95. Grades 4-8 BKL* PW SLJ

Scott, Jack Denton, and Ozzie Sweet. THE GULLS OF SMUTTYNOSE ISLAND. Putnam, 1977. 64 p. $6.95. Grades 5-12 BKL* KR PW

Scott, Jack Denton, and Ozzie Sweet. LITTLE DOGS OF THE PRAIRIE. Putnam, 1977. 64 p. $7.95. Grades 4-9 BCCB BKL* HB KR SLJ

Swenson, Allan A. BIG FUN TO GROW BOOK. McKay, 1977. 170 p. $7.95. Grades 4-9 BKL KR PW SBF SLJ

Zappler, Georg. BEHIND THE SCENES AT THE ZOO. Doubleday, 1977. 89 p. $5.95. Grades 5-8 BKL SLJ

Zim, Herbert S. OWLS. Rev. ed. Morrow, 1977. 64 p. $4.59. Grades 3-6 BKL KR SLJ